

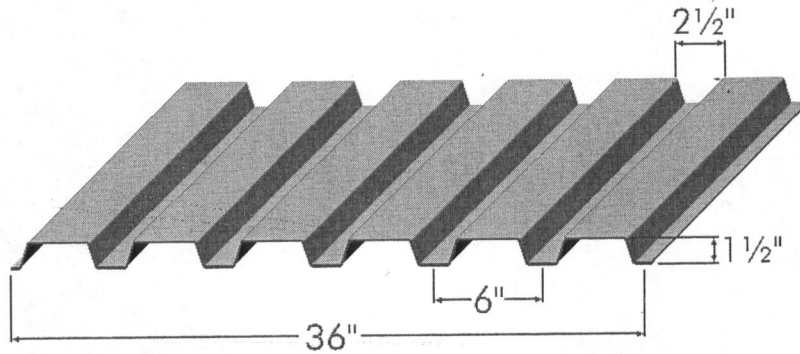
B DECK

1-1/2" high x 6" pitch x 36" wide

SECTION PROPERTIES

$f_y = 33 \text{ ksi}$

| GAGE | t (in) | Wd (psf) | Ip (in ⁴) | | Sp (in ³) | | Sn (in ³) | | Rbe (lb/ft) | | Rbi (lb/ft) | | Vn (lb/ft) | |
|------|-----------|-------------|--------------------------|--------------------|--------------------------|--------------------|--------------------------|------|-------------|------|-------------|------|------------|--|
| | | | (in ⁴) | (in ⁴) | (in ³) | (in ³) | LRFD | ASD | LRFD | ASD | LRFD | ASD | | |
| 22 | 0.0295 | 1.7 | 0.162 | 0.187 | 0.194 | 0.202 | 597 | 430 | 1404 | 1013 | 2587 | 1794 | | |
| 20 | 0.0358 | 2.0 | 0.209 | 0.227 | 0.240 | 0.250 | 828 | 597 | 2167 | 1563 | 3140 | 2177 | | |
| 18 | 0.0474 | 2.7 | 0.299 | 0.304 | 0.327 | 0.335 | 1344 | 969 | 3815 | 2751 | 4157 | 2882 | | |
| 16 | 0.0598 | 3.3 | 0.383 | 0.383 | 0.420 | 0.422 | 2028 | 1462 | 5919 | 4269 | 5245 | 3636 | | |



MAXIMUM ALLOWABLE UNIFORM TOTAL LOADS, (psf) **

| GAGE | SINGLE SPAN | | | | DOUBLE SPAN | | | | TRIPLE SPAN | | | | | | | | | | | | | | | |
|--------|-------------|-----|------|-----|-------------|-----|------|-----|-------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 | | | | | | | | | | | | |
| span | LRFD | ASD | LRFD | ASD | LRFD | ASD | LRFD | ASD | LRFD | ASD | LRFD | ASD | | | | | | | | | | | | |
| 3'-0" | 398 | 284 | 400 | 352 | 400 | 400 | 400 | 400 | 374 | 270 | 400 | 349 | 400 | 400 | 400 | 400 | 400 | 307 | 400 | 400 | 400 | 400 | 400 | 400 |
| 3'-6" | 257 | 209 | 330 | 259 | 400 | 352 | 400 | 400 | 321 | 211 | 400 | 260 | 400 | 348 | 400 | 400 | 365 | 259 | 400 | 319 | 400 | 400 | 400 | 400 |
| 4'-0" | 176 | 160 | 224 | 198 | 317 | 270 | 400 | 347 | 256 | 162 | 315 | 200 | 400 | 269 | 400 | 339 | 315 | 200 | 388 | 247 | 400 | 331 | 400 | 400 |
| 4'-6" | 126 | 126 | 161 | 157 | 226 | 213 | 286 | 274 | 204 | 129 | 251 | 159 | 337 | 213 | 400 | 269 | 229 | 160 | 294 | 197 | 400 | 264 | 400 | 333 |
| 5'-0" | 95 | 95 | 120 | 120 | 167 | 167 | 211 | 211 | 166 | 105 | 204 | 129 | 274 | 174 | 346 | 219 | 170 | 130 | 217 | 160 | 306 | 215 | 389 | 271 |
| 5'-6" | 74 | 74 | 92 | 92 | 128 | 128 | 161 | 161 | 137 | 87 | 169 | 107 | 227 | 144 | 287 | 182 | 130 | 108 | 165 | 133 | 232 | 179 | 295 | 225 |
| 6'-0" | 59 | 59 | 74 | 74 | 101 | 101 | 126 | 126 | 116 | 73 | 143 | 90 | 191 | 121 | 242 | 153 | 103 | 91 | 130 | 112 | 181 | 151 | 229 | 190 |
| 6'-6" | | | 60 | 60 | 82 | 82 | 102 | 102 | 99 | 63 | 122 | 77 | 164 | 103 | 206 | 131 | 83 | 78 | 104 | 96 | 145 | 129 | 182 | 162 |
| 7'-0" | | | 50 | 50 | 67 | 67 | 83 | 83 | 84 | 54 | 105 | 67 | 141 | 89 | 178 | 113 | 68 | 67 | 85 | 83 | 118 | 111 | 148 | 140 |
| 7'-6" | | | | | 57 | 57 | 70 | 0 | | | 88 | 58 | 122 | 78 | 153 | 98 | | | 71 | 71 | 98 | 97 | 122 | 122 |
| 8'-0" | | | | | 48 | 48 | 59 | 59 | | | 75 | 51 | 102 | 69 | 128 | 87 | | | 60 | 60 | 82 | 82 | 103 | 103 |
| 8'-6" | | | | | | | 51 | 51 | | | | | 87 | 61 | 109 | 77 | | | | | 70 | 70 | 87 | 87 |
| 9'-0" | | | | | | | 44 | 44 | | | | | 75 | 54 | 93 | 68 | | | | | 61 | 61 | 75 | 75 |
| 9'-6" | | | | | | | | | | | | | 65 | 49 | 81 | 61 | | | | | 53 | 53 | 65 | 65 |
| 10'-0" | | | | | | | | | | | | | | | 71 | 56 | | | | | | | 57 | 57 |
| 10'-6" | | | | | | | | | | | | | | | 62 | 50 | | | | | | | 51 | 51 |
| 11'-0" | | | | | | | | | | | | | | | | | | | | | | | | |

MAXIMUM CONSTRUCTION SPANS (center-to-center of supports)

| span | 5'-9" | 6'-6" | 7'-9" | 8'-10" | 6'-9" | 7'-8" | 9'-2" | 10'-5" | 6'-9" | 7'-8" | 9'-2" | 10'-5" |
|------------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|
| cantilever | 2'-0" | 2'-4" | 2'-8" | 3'-0" | 2'-0" | 2'-4" | 2'-8" | 3'-0" | 2'-0" | 2'-4" | 2'-8" | 3'-0" |
| FM | 6'-0" | 6'-6" | 7'-5" | - | 6'-0" | 6'-6" | 7'-5" | - | 6'-0" | 6'-6" | 7'-5" | - |

| span | design method | | maximum allowable uniform total (dead+live) load ** |
|-------|---------------|-----|---|
| | LRFD | ASD | |
| 3'-0" | 398 | 284 | span (center-to-center of supports) |

- t Design thickness of deck
- Wd Weight of deck (uncoated)
- As Average area of steel of deck per foot width
- Ip Moment of inertia of deck for positive bending
- In Moment of inertia of deck for negative bending
- Sp Section modulus of deck for positive bending
- Sn Section modulus of deck for negative bending
- Rbe Allowable exterior web crippling value per foot of deck (based on 2" of end bearing)
- Rbi Allowable interior web crippling value per foot of deck (based on 4" of interior bearing)
- Vn Allowable shear value per foot of deck

- span Maximum single or multiple span during construction
- cantilever Maximum cantilever during construction
- FM Maximum allowable span per Factory Mutual
- f_y 33 ksi (for determining maximum loads)
- f_{span} 26 ksi (for determining maximum spans)
- ** An assumed 10 psf dead load is added to deflection

The section property table is based on AISI's Cold Formed Steel Design Manual, 1996 Edition.

The loads and maximum construction spans are based on the Design Manual for Composite Decks, Form Decks, Roof Decks and Cellular Deck Floor Systems with Electrical Distribution, Pub No. 29. Available as acoustical, see page 37 for additional information.